

## June 20, WEDNESDAY

8:00 - 9:00	Registration			Language
9:00 - 9:10	Opening and Welcome of the Congress: Iñaki San Sebastian - CEO of Tecnalia / Pablo García Astrain - Director of Housing and Architecture of the Basque Government			Language
ROOM 1+2		ROOM 1+2	ROOM 1+2	Language
9:10 - 9:30	<b>Facades: past, present and future use of aluminium - marking 50 years of FAECF</b> - Justin Furness (FAECF)			English
9:30 - 10:00	<b>Shaping the Built Environment of Tomorrow. How and Who</b> - Norbert Praille (ED. Züblin AG)			English
10:00 - 10:30	<b>WASL Tower, computational solutions for a complex façade</b> - Ger Gijzen (UNStudio)			English
10:30 - 11:00	<b>The envelope, a decisive element in a sustainable building certification</b> - Patrick NOSSENT (CERTIVEA-CERWAY)			English
11:00 - 11:30	COFFEE BREAK, B2B MEETINGS			
ROOM 3 / ICT + FACADES + FACADES		ROOM 4+5 / THERMAL IN BUILDING CONSTRUCTION	ROOM 1 / ROBOTICS AND CONSTRUCTION	Language
11:30 - 11:45	<b>Towards a digital workflow for special façade constructions</b> Juan Sebastián Sepúlveda - (SCHÜCO International KG)	<b>An analysis of the potential for envelope-integrated solar heating and cooling technologies for reducing energy consumption in European climates</b> - Peru Elguezabal, Beñat Arregi - (TECNALIA)	<b>Use of robots for facades installation - Hephaestus Project</b> Julen Astudillo - (TECNALIA)	English
11:45 - 12:00	<b>BIM based software tools for the design and simulation of building-integrated photovoltaic systems</b> Philippe Alamy <sup>1</sup> , Van Khai Nguyen <sup>1</sup> , Maider Machado <sup>2</sup> , Ingrid Weiss <sup>3</sup> - (CADCAMation SA - <sup>2</sup> TECNALIA - <sup>3</sup> WIP Renewable Energies)	<b>Building guidelines to provide as-designed solutions for energy-efficient envelopes</b> Benedetta Marradi <sup>1</sup> , Emanuele Piaia <sup>2</sup> , Rizal Sebastian <sup>3</sup> , Eva Kassotaki <sup>3</sup> - ( <sup>1</sup> University of Pisa and AICE Consulting, <sup>2</sup> University of Ferrara, <sup>3</sup> DEMO Consultants)	<b>Cable-Driven Parallel Robots: Principle and Applications of an Advanced Crane System</b> - JeanBaptiste Izard <sup>1</sup> , Marc Goutteferde <sup>2</sup> , Hussein Hussein <sup>3</sup> , Christoph Martin <sup>3</sup> , Werner Kraus <sup>3</sup> , Andreas Pott <sup>3</sup> , and Mariola Rodriguez <sup>4</sup> - ( <sup>1</sup> TECNALIA France - <sup>2</sup> Laboratoire d'Informatique, de Robotique et de Microélectronique de Montpellier - <sup>3</sup> Fraunhofer Institute for Manufacturing Engineering and Automation IPA - <sup>4</sup> TECNALIA)	English
12:00 - 12:15	<b>BIM from concept design to fabrication: An optimized methodology for façade consultations</b> Ana Gallego Fernández, Miguel A. Núñez Díaz, A. Mateo Marcos Núñez - (ENAR, Architectural Envelopes)	<b>Concept for adaptive wall elements with switchable U- and g-value</b> Nikolaus Nestle <sup>1</sup> , Thibault Pflug <sup>2</sup> , Christoph Maurer <sup>2</sup> , Frank Prissok <sup>3</sup> , Andreas Hafner <sup>4</sup> , Frank Schneider <sup>5</sup> - (1BASF SE Advanced Materials and Systems Research - 2Fraunhofer ISE - 3BASF Polyurethanes GmbH - 4BASF Schweiz AG - 5Okalux GmbH)	<b>Development of a Modular End Effector for the installation of Curtain Walls with cablerobots</b> Meysam Taghavi <sup>1</sup> , Homero Heredia <sup>2</sup> , Kepa Iturralde <sup>1</sup> , Håvard Halvorsen <sup>2</sup> , and Thomas Bock <sup>1</sup> - ( <sup>1</sup> Chair of Building Realization and Robotics, Technical University of Munich - <sup>2</sup> Link AS)	English
12:15 - 12:30	<b>Dynamic Façade</b> Albert López Crespo - (SOMFY)	<b>Unglazed Solar Thermal Systems for building integration, coupled with District Heating Systems. Conceptual Definition, Cost &amp; Performance Assessment</b> - Mikel Lumbereras <sup>1</sup> , Roberto Garay <sup>2</sup> , Koldobika Martín <sup>1</sup> - ( <sup>1</sup> University of the Basque Country - <sup>2</sup> TECNALIA)	<b>Construction Robotics – The potential for automation in lightweight metal construction</b> - Prof. Markus Kuhnhenne <sup>1</sup> , Dominik Pyschny <sup>1</sup> , Prof. Sigrud Brell-Cokcan <sup>2</sup> , Daniel Haarhoff <sup>3</sup> - ( <sup>1</sup> Faculty of Civil Engineering, <sup>2</sup> Faculty of Architecture - RWTH Aachen University)	English
12:30 - 12:45	<b>An ICT energy management system for the management of innovative ventilated envelopes</b> José L. Hernández, Roberto Sanz, Álvaro Corredera, Susana Gutiérrez, Ricardo Palomar, Isabel Lacave (CARTIF technology centre)	<b>Transpired solar air heating &amp; cooling collector</b> Alfonso Pérez Carballo, Almudena Galana y J. Emilio Vega (SolarWall Spain)	<b>NEW MATERIALS FOR THE ENVELOPE (BIOCOMPOSITES)</b> <b>New Biocomposites for Innovative Construction Facades and Interior Partitions</b> - Julen Astudillo <sup>1</sup> , Miriam García <sup>2</sup> , Javier Sacristán <sup>3</sup> , Nayra Uranga <sup>4</sup> , Markku Leivo <sup>5</sup> , Michaela Mueller <sup>6</sup> , Inma Roig <sup>7</sup> , Sarka Langer <sup>8</sup> , Gianluca Gemignani <sup>9</sup> , Markku Vilkkii <sup>10</sup> , Ger Gijzen <sup>11</sup> , Susana Silva <sup>12</sup> , M.A. Nuñez <sup>13</sup> , Michal D bek <sup>14</sup> , Marius Sprenger <sup>15</sup> - ( <sup>1</sup> TECNALIA, <sup>2</sup> IK4-Lortek, <sup>3</sup> Acciona Construcción, <sup>4</sup> VTT, <sup>5</sup> Fraunhofer/FHR, <sup>6</sup> Aimplas, <sup>7</sup> IVL, <sup>8</sup> Collanti Concorde, <sup>9</sup> Conenor Oy, <sup>10</sup> UNStudio, <sup>11</sup> Amorim, <sup>12</sup> ENAR, <sup>13</sup> Bergamo Technologie, <sup>14</sup> SICC GmbH)	English
12:45 - 13:00	<b>IOT and Data Analytics: Saving potential for Building Envelopes and Occupancy based office building management</b> Ivan Araquistain, Unai Saralegui, Miguel Angel Antón, Amaia Castelruiz, Jose Manuel Olaizola - (TECNALIA)	<b>Low Temperature Solar Thermal System for Building Envelope Integration</b> Marina Palacios <sup>1</sup> , Roberto Garay <sup>2</sup> , Ignacio Gomis <sup>3</sup> , Paul Bonnamy <sup>4</sup> , Saed Raji <sup>5</sup> , Koldobika Martín <sup>1</sup> - ( <sup>1</sup> Euskal Herriko Unibertsitatea - <sup>2</sup> TECNALIA - <sup>3</sup> Nobatek-Inef) )	<b>Architectural advantages/disadvantages of using biocomposites in construction</b> Ger Gijzen - UNStudio	English
13:00 - 13:15	<b>ADDITIVE MANUFACTURING AND 3D MODELS</b>	<b>ARCHITECTURAL BUILDING GLASS</b>	<b>Influence of material on curtain wall design</b> Miguel A. Núñez Díaz - (ENAR, Architectural Envelopes )	English
13:15 - 13:30	<b>Les Pavillons des Boulingrins, example of parametric ephemeral architecture. 3d cladding modelling with re-usable criteria</b> C.Valderrama, M.Plocikiewicz, J.Ocampo, F.Cottaz - (Acieroid S.A.)	<b>Structural Glass Connections</b> Carles Teixidor, Jordi Torres, Francesc Arbós - (Bellpart S.A.U.)	<b>High-quality edge enameling for architectural glass</b> Ralf Greiner - (Guardian Glass Europe)	English
13:30-15:00	LUNCH, B2B MEETINGS			
NEW DEVELOPMENTS		CALCULATION - SIMULATIONS	NEW SOLUTIONS RELATED TO REHABILITATION	Language
15:00 - 15:15	<b>EZVENT: an energy efficient ventilated façade retrofitting system. Presentation of the embedded energy storage system</b> A. Dugué <sup>1</sup> , A. Navarro <sup>1</sup> , S. Raji <sup>2</sup> , P. Bonnamy <sup>1</sup> , D. Bruneau <sup>3</sup> - ( <sup>1</sup> Nobatek/INEFA - <sup>2</sup> EnsapBx, GRECAU)	<b>Simulation-based performance prediction of an energy-harvesting façade system with selective daylight transmission</b> Hemshikha Saini, Roel C.G.M. Loonen, Jan L.M. Hensen (Eindhoven University of Technology)	<b>Breakthrough adaptable envelopes: a solution to accelerate the refurbishment of the existing building stock?</b> - D. Hernandez Maldonado <sup>1</sup> , K. Laffont-Eloire <sup>1</sup> , I. Lacave <sup>1</sup> , I. Apraiz Egaña <sup>2</sup> , and R. Garay Martinez <sup>3</sup> ( <sup>1</sup> TECHNOFI - <sup>2</sup> ACCIONA Construcción S.A. - <sup>3</sup> TECNALIA)	English
15:15 - 15:30	<b>Innovative curtain wall with solar preheating of ventilation air and integrated control system</b> - Diego González <sup>1</sup> , Beñat Arregi <sup>2</sup> , Roberto Garay <sup>2</sup> , Izaskun Álvarez <sup>2</sup> , Gorka Sagarduy <sup>1</sup> - ( <sup>1</sup> UXAMA Fachadas Singulares - <sup>2</sup> TECNALIA)	<b>Characterisation of the thermal performance of the roof ridge Sunridge® solar hot water system</b> - E. Fuentes, J. Salom - (Catalonia Institute for Energy Research (IREC))	<b>Assessment method for developments in building envelope renovation with prefabricated modules</b> - Kepa Iturralde <sup>1</sup> , Nagore Tellado <sup>2</sup> , Thomas Bock <sup>1</sup> , Ignacio Gomis <sup>3</sup> - ( <sup>1</sup> Chair for Building Realization and Robotics, Technical University of Munich - <sup>2</sup> TECNALIA)	English
15:30 - 15:45	<b>On the development of a façade-integrated solar water storage</b> D'Antoni M., Bonato P. and Fedrizzi R. - (Eurac Research)	<b>Façade impulse: experimental methods for stretching the envelope beyond human comfort</b> - A. Luna-Navarro <sup>1</sup> , M. Meizoso <sup>2</sup> , H. De Bleecker <sup>3</sup> , Y. Verhoeven <sup>4</sup> , M. Donato <sup>5</sup> , M. Overend <sup>6</sup> - ( <sup>1</sup> University of Cambridge - <sup>2</sup> Ove Arup, London - <sup>3</sup> Pernasteeleisa group)	<b>A multifunctional façade system for multifamily houses</b> Roberto Fedrizzi - (EURAC Research)	English
15:45 - 16:00	<b>BRESAER. Breakthrough Solutions for Adaptable Envelopes in Building Refurbishment</b> Imanol Aguirre <sup>1</sup> , Asier Azpiazu <sup>1</sup> , Isabel Lacave <sup>2</sup> , Izaskun Álvarez <sup>2</sup> , Roberto Garay <sup>3</sup> - ( <sup>1</sup> Department of Innovation, LKS - <sup>2</sup> Acciona Infraestructuras - <sup>3</sup> TECNALIA)	<b>OPTIMUS, physics simulations for optimal design</b> Quim Moya Sala - (APOGEA)	<b>Renovation of residential buildings: strengths and weaknesses of a research approach based on prefabrication and real case-studies</b> - F. Babicha <sup>1</sup> , R. Pinottia <sup>2</sup> , R. Perneti <sup>1</sup> , R. Lollini <sup>1</sup> - (1EURAC Research, Institute for Renewable Energy, Bolzano - 2Free University of Bozen-Bolzano)	English
16:00 - 16:15	<b>An optimized system that combines industrialized waterproof roofing with high thermal performance insulation in one prefabricated solution</b> - Valérie Huet <sup>1</sup> , Guillermo Sebastian <sup>2</sup> , Didier Broidoux <sup>3</sup> - ( <sup>1</sup> Advanced Coatings & Construction Solutions – CRM GROUP, <sup>2</sup> ArcelorMittal Construcción España Distribution Solutions Iberia, <sup>3</sup> ArcelorMittal Global Research & Development)	<b>Hybrid numerical and experimental performance assessment of structural thermal bridge</b> Roberto Garay Martinez - (TECNALIA)	<b>Barriers to overcome for an increase of the innovation in the renovation sector. Elements of feedbacks from the EZVENT project</b> A. Dugué, G. Adell - (Nobatek/INEFA)	English
16:15 - 16:45	COFFEE BREAK, B2B MEETINGS			
16:45 - 17:00	<b>Smart modular heat recovery unit (smhru) installed in the cavity of a ventilated façade</b> Alberdi Lizaso, H. Urrea Mardaras, I. Martínez Urrutia, A. - (TECNALIA)	<b>TOOLS</b>	<b>NEW MATERIALS</b>	Language
17:00 - 17:15	<b>Design, fabrication and demonstration of a multifunctional module for sustainable façade lighting based on ETFE architecture</b> - A. Menéndez <sup>1</sup> , A.L. Martínez <sup>2</sup> , A. Santos <sup>3</sup> , B. Ruiz <sup>4</sup> , K. Moritz <sup>5</sup> , I. Klein <sup>6</sup> , J. Diaz <sup>7</sup> , A.R. Lagunas <sup>8</sup> , T. Sauermann <sup>9</sup> , J.R De Las Cuevas <sup>8</sup> , D. Gómez <sup>9</sup> - (ITMA Materials Technology - <sup>2</sup> Taiyo Europe GmbH - <sup>3</sup> Fundación CENER-CIEMAT - <sup>4</sup> OPVIUS GmbH - <sup>5</sup> ACCIONA INFRAESTRUCTURAS)	<b>Façade taxonomy: A shared tool for new façade developments</b> Cristina Pardal, Oriol Roig, Ignacio Paricio - (Polytechnic University of Catalonia)	<b>Exploring the potential of Smart and Multifunctional Materials in Adaptive Opaque Façade Systems</b> Miren Juaristi, Aurora Monge-Barrio, Ana Sánchez-Ostiz, Tomás Gómez-Acebo - (University of Navarra)	English
17:15 - 17:30	<b>ACOUSTICS</b>	<b>Façade Leasing: Drivers and barriers to the delivery of integrated facades-as-a-service:</b> Azcarate-Aguerre, J.F. (B.Arch.Ir.) <sup>1</sup> , Klein, T. (Prof.Dr.-Ing), Den Heijer, A.C. (Prof.Dr.Ir.), Vrijhoef, R. (Dr.Ir.), Ploeger, H.D (Prof.Dr.), Prins, M. (Dr.Ir.) - (Delft University of Technology, Faculty of Architecture and the Built Environment)	<b>Performances of innovative variable diffusivity membranes integrated within prefabricated timber facades: computer-based modelling and experimental analysis</b> Riccardo Pinotti <sup>1</sup> , Stefano Avesani <sup>2</sup> , Francesco Babich <sup>3</sup> , Andrea Gasparella <sup>4</sup> , Alice Speranza <sup>5</sup> - ( <sup>1</sup> Free University of Bozen - <sup>2</sup> Institute for Renewable Energy, EURAC - <sup>3</sup> Rothoblaas srl)	English
17:30 - 17:45	<b>Problems in the acoustic design of the Wanda Metropolitano Stadium envelopes</b> - Sánchez Ayuso, J; García Ruiz, J. - (GREENBACK)	<b>Integrated Building Energy Management System for devices into ventilated facades</b> Francisco J. Miguel and Roberto Sanz - (Fundación CARTIF)		English

NB: Conference sessions will be held in English or Spanish with simultaneous interpretation into Spanish or English.

## June 21, THURSDAY

ROOM 1+2				Language
9:00 - 9:30	<b>Torre Europa, A Tower renovation or an Urban intervention?</b> - Jorge Beroiz - Callison RTKL - (Conference sponsored by ACERINOX)			English
9:30 - 10:00	<b>Small scale architecture with large format</b> - Jesús Cerezo - (ENAR, Architectural Envelopes)			Spanish
10:00 - 10:30	<b>The Digital Mentality: Beyond Fashion Technology</b> - Javier Zamora - (Conference sponsored by SCHÜCO)			Spanish
10:30 - 11:00	<b>Castellana Project 77</b> - Carlos González - (Luis Vidal + Arquitectos) (Conference sponsored by GUARDIAN GLASS)			Spanish
11:00 - 11:30	COFFEE BREAK, B2B MEETINGS			
11:30 - 12:00	<b>Parc Glòries building (Barcelona)</b> - Albert Gil (BATLLE I ROIG Arquitectes) (Conference sponsored by RIVENTI)			English
12:00 - 12:30	<b>The Louvre Abu Dhabi – From Vision to Reality</b> - Anna Wendt - (BuroHappold Engineering I Facade Engineering)			English
12:30 - 13:00	<b>Transparency and Glass Connections</b> - Lisa Rammig - (Eckersley O'Callaghan)			English
13:00 - 13:30	<b>The digital age in Façade Technology</b> - Erik Rasker - (Conference sponsored by REYNAERS)			English
13:30 - 14:00	Pending final confirmation			
14:00 - 15:30	LUNCH, B2B MEETINGS			
15:30 - 18:30	<b>ROOM 2 - WORKSHOP 1 FIRE IN THE WORLD OF THE VENTILATED FACADES</b> (Workshop sponsored by ALUICOIL)	<b>ROOM 3 - WORKSHOP 2 FAÇADE RESTORATION, AN ALTERNATIVE MARKE</b> (Workshop sponsored by GRUPO ALUMAN)	<b>ROOM 4 - WORKSHOP 3 CONCRETE IN FACADES. NEW FEATURES FOR INNOVATIVE DESIGNS</b> (Workshop sponsored by HEIDELBERGCEMENT HISPANIA)	<b>ROOM 5 - WORKSHOP 4 - INDUSTRY 4.0 AND THE ENVELOPE</b> (Workshop sponsored by SCHÜCO)
<b>CONFERENCES</b> Different standards and full-scale fire spread tests around the world Pablo Garmendia (TECNALIA)  The importance of isolation products in fire spread Mercedes Sánchez - (ROCKWOOL)  The influence of different panel products in fire spread Zigor Marroquin - (ALUICOIL)  Spanish reaction to Grenfell tragedy. Standards review Speaker under definition  Specialist point of view of what's happening now and what will happen in future in ventilated façades due to Grenfell changes worldwide Nick Jenkins - (BOOTH MUIRIE)  <b>DISCUSSION</b>		<b>CONFERENCES</b> Introduction and presentation of participants Xavier Ferrés (Ferrés architects and consultants) (10 min.)  Short-presentations for contact and positioning (50 min.) - Angel Cid. Architect. (2C Architects.) - Pablo Garrido (specialist in new Construction and refurbishment of large-format buildings - Universitat Politècnica de Catalunya) - Asset manager - To be determined - David Troca Garcia. Business development in the rehabilitation of architectural envelopes (Aluman Group) - Architect specialized in architectural heritage - Speaker under definition <b>BREAK (20 min.)</b> <b>DISCUSSION (90 min.)</b> <b>CONCLUSIONS</b> Xavier Ferrés (Ferrés architects and consultants) (10 min.)	<b>CONFERENCES</b> The void as a space that generates architecture Carlos Ferrater - (OAB)  The unbearable lightness of the light facades Mario Sangalli - (Estudio Peña Ganchequi)  More sustainable enclosures with lightened architectural concrete Luis Ruano (PREHORQUISA)  Prefabricated and industrialized concrete solutions for architectural envelopes: current state and projection Alejandro López (ANDECE)  <b>ROUND TABLE DISCUSSION AND DEBATE</b>  Participants: Manuel Aires Mateus, Carlos Ferrater, Luis Ruano, Mario Sangalli and Alejandro López  Moderators: José Manuel Pozo and Daniel Rincón de la Vega  <b>FINAL CONFERENCE</b> Projects: Manuel Aires Mateus (Aires Mateus e Associados)	(Detail description of the Workshop under definition)
Language	English-Spanish	Spanish	English-Spanish	English-Spanish
20:00	CONFERENCE DINNER (REAL CLUB TENIS)			

## June 22, FRIDAY

ROOM 1+2				Language
9:00 - 9:30	<b>Double Skin Glass Box - Banco Popular HQ Auditorium Case Study</b> - Pedro Rodrigues - (Martifer Metallic Constructions)			English
9:30 - 10:00	<b>COST Action "Adaptive Facades Network"</b> - Andreas Luible - HSLU& TA			English
10:00 - 10:30	<b>South Terminal of Tocumen Airport - Swinging facades in Panama</b> - Paulo Alexandre - (GRUPO ALUMAN)			English
10:30 - 11:00	<b>Prado at a Glance</b> - Yamen Badr - (BENYO) - (Conferencia Patrocinada por LANIK)			English
11:00 - 11:30	COFFEE BREAK, B2B MEETINGS			
11:30 - 12:00	<b>Adaptability and flexibility of light skins</b> - Pablo Garrido - (Universitat Politècnica de Catalunya)			Spanish
12:00 - 12:30	<b>Facades for extreme architecture</b> - Xavier Ferrés - (Ferrés arquitectos y consultores)			Spanish
12:30 - 13:00	<b>Greenspire building</b> - Julián Franco (Conference sponsored by EQUITONE)			Spanish
13:00 - 13:30	<b>Glass Design: Are We Sure?</b> - Adrián Roiz <sup>1</sup> , Miguel Ángel Núñez <sup>2</sup> - Spanish structural glass standardisation group (Eurocode) (1ARUP; <sup>2</sup> ENAR, Architectural Envelopes)			Spanish
13:30 - 13:50	<b>System Integration in unitized curtain Wall</b> - Andrés Campos - (ACV Ingeniería de Fachadas)			Spanish
13:50 - 14:00	Closing remarks			
14:00 - 15:30	LUNCH - END OF CONGRESS			

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